

REMARKS

Restriction Requirement

Restriction is required between the following groups of claims as identified by the Examiner:

- I. Claims 1-16 – Apparatus for treating the surface of a workpiece
- II. Claims 17-19 – Method for treating the surface of a workpiece.

The inventions are said to be distinct because the apparatus can be used for treating the inside of a tube which is a dielectric intermediate or for treating the inside of a twin chamber rather than treating the surface of a workpiece. The cited differences are only semantic. If the inside of a tube or chamber is being treated, the tube or chamber *is by definition* the workpiece. There is no requirement found in the application that the workpiece be separate from, or removable from, the apparatus, that it be of any particular size, shape or function. If the apparatus is used to treat the inside of a tube/chamber, a surface of a workpiece is being treated and the claims cover the same.

Restriction is required between the following species as identified by the Examiner, with Claim 1 being generic:

Species 1 – Figs. 1-3

Species 2 – Fig. 4

Species 3 – Fig. 5

Species 4 – Fig. 6

Species 5 – Fig. 7

Applicants respectfully submit all identified species are covered by generic Claim 1, as acknowledged by the Office Action. Since Claim 1 is believed to be allowable, as set forth hereinbelow, Applicants respectfully request all species thereunder be similarly allowed.

Applicants confirm, with traverse, the telephonic election of Group I, Species 1, Claims 1-5.

Drawings

The drawings are objected to because the reference numerals 30 and 50 are transposed in Fig. 4. Appropriate correction has been made.

The drawings have been objected to for not including reference numeral 82, as shown in the specification at 8:4. The specification has been corrected to replace reference numeral 82 with reference numeral 28.

The drawings are also objected to for failure to include reference numerals 34 and 39. Appropriate corrections have been made to Figs. 1 and 2.

In view of the foregoing, the Examiner is respectfully requested to withdraw the objections to the drawings.

The Amendments

Claim 1 is amended hereunder to recite that the apparatus comprises a plurality of powerable electrodes, and dielectrics in contact with the powerable electrodes. Basis is found in the specification (6:8-10; 6:15-17, respectively). Newly added Claim 22 recites differential gas flow in the flow channels. Basis is found in the specification (6:27-29). Newly added Claims 24-25 recite differently-sized electrodes and different power levels applied to the electrodes. Basis is found in the specification (10:17-18). Newly added Claim 26 recites a glass dielectric in contact with the powerable electrode. Basis is found in the specification (p. 13, Ex. 1). No new matter is added.

Typographical errors on pp. 8-9 are also corrected.

Rejection Under 35 USC 102

Claims 1-3 are rejected under 35 USC §102(e) as anticipated by Crowe et al. (2003/0052096 A1). Claims 1-5 are rejected under 35 USC §103(a) over Koinuma (5,549,780). Collectively, Crowe and Koinuma teach powerable electrodes disposed in apertures. However, these references, taken individually or collectively, fail to teach that the dielectric is in contact with the powerable electrode – e.g., Koinuma specifically teaching the gap between the insulator and central electrode is less than 5 mm and preferably below 1 mm (8:16-19). Koinuma teaches a dielectric in contact with a groundable electrode (Fig. 8). Each reference fails to recognize or suggest that contacting the dielectric to the powerable electrode provides advantages not obtained



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thereby. The Crowe and Koinuma configurations do not provide the cooler plasma achievable only with the claimed invention. By providing the cooler plasma, organic polymers can be deposited without damaging the substrate.

Claims 4-5 are also rejected under 35 USC §103(a) over Crowe et al. The Office Action correctly notes that regarding Claim 5, the Federal Circuit has held that under certain conditions, recitation of relative dimensions does not provide patentability. Here, Claim 1 has been amended to recite absolute dimensions.

The Office Action states that selecting the relative "size" of Claim 5 is necessary to sustain a stable discharge rather than arcing. However, as cited in the instant Specification (6:18-26), the claimed spacing is, in fact, selected to provide the proper combination of manufacturing tolerance and voltage requirements. Such a combination has not been recognized in the art to be a result-effective variable. Only result-effective variables can be optimized. If such dimension has not been shown to be result-effective, it can neither be optimized nor be characterized as routine experimentation or obvious. MPEP 2144.05(b).

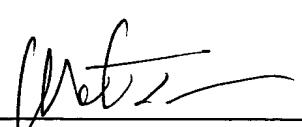
Newly added Claims 20-25 recite differential conditions achievable with the claimed invention. Such differential conditions allow for zone control and thus preferred treatment of the substrate as set forth in the specification (9:10-11). Such zone control provides better treatment of the substrate, taking into account edge effects, etc.

Conclusion

All matters raised by the Office Action are believed to be addressed by the amendments made hereunder and drawing corrections submitted hereunder. The Examiner is respectfully requested to reconsider and allow all claims remaining in the application.

Respectfully submitted,

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